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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,049	10/12/2000	Norihisa Miyoshi	2000_1162A	5687

7590 03/09/2004

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Washington, DC 20006

EXAMINER
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DUONG, THANH P

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/623,049

Applicant(s)

MIYOSHI ET AL.

Examiner

Tom P Duong

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/01/2001.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3-4, 6, 9, and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Maeda et al. (4,886,246). Regarding claim 1, Maeda et al. discloses a fluidized-bed furnace comprising: a discharge port **6b** provided in the vicinity of a floor in a fluidized bed **7b** for discharging a fluidized medium (Col. 5, lines 61-65 and Figure 2), the discharge port **6b** is connected to a fluidized medium discharge chute **4** extending downwardly; and a reducing gas is supplied to a conduit **3** (Col. 5, lines 36-39 and Figure 2), which constitutes a gas blow device **3**. Regarding claim 3, Maeda shows on Figure 2 that the gas blow device **3** is provided at the lowermost part of the fluidized medium discharge chute. Regarding claims 4 and 9, Maeda discloses the gas blow device uses steam, carbon dioxide, or oxygen-free gas (Col. 7, lines 47-53). Regarding claims 6, 13, and 14, Maeda (as best understood by examiner) discloses a fluidized bed furnace with plurality of performing sections such as the discharge chute **4** for discharging large or medium particles, "fluidized bed" at **7b** for reducing medium particles, and portion **1a** for reducing finer particles, and exhaust duct **11** to accommodate waste gas. In addition, the claim language "so that said fluidized-bed reactor can easily deal with fuels having different properties by changing the

combination of each units" has been interpreted as intended use and does not further recite structural limitations for the features of the apparatus (See MPEP 2114).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 2, 5, 7-8, 10-12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda '246 in view of Ohshita et al. (4,823,740). Regarding claims 2, 5, and 10-11, Maeda does not show a mechanical device for removing the fluidized medium in the lowermost part of the fluidized medium discharge chute. Ohshita '740 teaches it is conventional to provide a screw conveyor 72 as a mechanical means of

removing the incombustible residue or fluidizing medium away from a discharge passage 69 or discharge chute (Col. 6, lines 57-63). Thus, it would have been obvious in view of Ohshita to one having ordinary skill in the art to provide a screw conveyor as taught by Ohshita in the fluidized-bed furnace of Maeda in order to remove incombustible residues and/or fluidized medium away from the discharge chute. Claims 7-8 recite limitations similar to claims 3 and 4, respectively; thus, claims 7-9 are rejected for the same reasons as applied to claims 3 and 4, above. Regarding claims 12 and 15, Maeda (as best understood by examiner) discloses a fluidized bed furnace with plurality of performing sections such as the discharge chute 4 for discharging large or medium particles, "fluidized bed" at 7b for reducing medium particles, and portion 1a for reducing finer particles, and exhaust duct 11 to accommodate waste gas. In addition, the claim language "so that said fluidized-bed reactor can easily deal with fuels having different properties by changing the combination of each units" has been interpreted as intended use and does not further recite structural limitations for the features of the apparatus (See MPEP 2114).


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TD *Tb*  
March 2, 2004

  
Alexa Dorashenk  
Patent Examiner 1764